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| 09/619,361 | 07/19/2000 | Masafumi Usuda | 15689.54 | 2184 |

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DATE MAILED: 07/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**.     2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-22* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10 and 12-21* is/are rejected.

7)☒ Claim(s) *11 and 22* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

## DETAILED ACTION

### *Response to Arguments*

1.  Applicant's arguments with respect to claims 1-22 have been considered but are moot in view

of the **new** ground(s) of rejection.

**Regarding claims 1 and 12, the applicant argued that**, "…Amezawa does not

disclose the **calculation of differences** of propagation estimation values between **different**

**times** in the past and the **certain time (i.e. changing amount during the time periods)…"**

in page 13, last paragraph.

**In response to applicant's argument** that the references fail to show certain features

of applicant's invention, it is noted that the features upon which applicant relies (i.e.,

**calculation of differences, different times, and certain time**) are not recited in the rejected

claim(s). Although the claims are interpreted in light of the specification, limitations from

the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26

USPQ2d 1057 (Fed. Cir. 1993).

**Regarding claims 2 and 13, the applicant argued that**, "…averaging of Vasic is

carried out in a time period of 1 pilot signal, and it is different from that of the invention of

claims 2 and 13…" in page 14, 2nd paragraph.

**In response to applicant's argument, the examiner respectfully disagrees** that the

Vasic does not disclose the claimed invention averaging/estimation means. Claim limitation

discloses "estimation means" which is disclosed by Vasic in FIG. 2, Channel Estimator 40.

Also, note that Sawahashi also discloses invention of averaging means in col. 6, line 17-25.

**Regarding claims 2 and 13, the applicant argued that**, "...Shiraki ...does not

estimate a variation from different transmit power control section in the past to a certain

present..." in page 14, 4th paragraph.

**In response to applicant's argument, the examiner respectfully disagrees** that the

combined system of Vasic and Shiraki does not estimate a variation from different transmit

power control section in the past to a certain present. Vasic estimates a variation, see Vasic's

FIG. 2, Channel Estimator 40. Shiraki discloses **different** transmit power control section in

the past to a certain present and calculate the variation/differences. In particular, Shiraki's

receiver unit determines the changes in the transmit power received between **different**

transmit power control sections: $n^{th}$ period (i.e. present section) and $n-1^{th}$ period (i.e. the past

section). Note that present period and past period are different power control sections. Then

after, the step size (i.e. the changing power amount) is determined whether to increase or

decrease the transmit power received in **col. 3, line 60 to col. 4, line 45; and col. 14, line 1-**

**67**.

In response to applicant's arguments against the references individually, one cannot

show nonobviousness by attacking references individually where the rejections are based on

combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In*

*re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

**Regarding claims 1, 2, 12 and 13, the applicant argued that**, "...and multiplying

the changing amounts...none of the Sawahashi, Ling, Kitade, Kubo, and the alleged well

known arts discloses this feature " in page 13 last paragraph and page 14, first paragraph.

**In response to applicant's argument, the examiner respectfully disagrees** that the "multiplying the changing amounts" features of applicant's invention is not shown by well-known art. Note that regarding claim 1 and 12, Amezawa discloses the **subtraction** the changing amounts/values. Rereading claim 2 and 13, Vasic discloses the combining/adding the changing amounts/values. In particular for claims 1 and 12, Amezawa'362 performs the correction by subtraction in order to obtain a result, which is used for averaging. Thus, it is clear that one skill in the art can also performs correction by **multiplying** in order obtain the same result as subtraction, which is used for averaging. Regardless of the type of method (i.e. subtraction or multiplying) being used, the end result, a corrected data in order to perform averaging, is the same. In particular for claims 2 and 13, Vasic'194 performs the correction by combing/adding in order to obtain a result of corrected data/value. Thus, it is clear that one skill in the art can also performs correction by **multiplying** in order obtain the same result as combing/adding. Regardless of the type of method (i.e. combing or multiplying) being used, the end result, a corrected data/value, is the same.

Moreover, it is noted that test for combining reference is what the combination of discloses taken as a whole would suggest to one ordinary skill in the art, thus, one cannot show non-obvious by arguing reference individually where, as here, the rejections are based on combination of references. In view of the above, the examiner believes that the combination of references as set forth in the 103 rejections is proper, thus, Claims 2 and 13 are obvious over Vasic, Shiraki, Sawahashi, in view of well established teaching in art for at least the reasons discussed above. Similarly, claims 1 and 12 are obvious over Amezawa, Sato, in view of well-established teaching in art for at least the reasons discussed above.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 7,9,10, 18,20 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

**Claim 7** recites the limitation "...using a power control indicator **from own station**" in page 4, line 12. It is unclear what "from own station" whether is it is a base station, mobile unit, or both.

**Claim 18,** please see claim 7 above.

**Claim 9,** recites "...**channel of which a in each**..." (in line 2, page 5 and line7), "...**high is higher** ..." (in line 4), and "...small is smaller..." (in line 4). It is unclear what above limitation exactly means or referring to.

**Claim 20,** please see claim 9 above.

**Claim 10** recites "...there is **not a channel other than channel**..." in page 5, line 21, "...**or even when transmitting but not performing**..." in page 6, line 4. It is unclear what above limitation exactly means or referring to. It is unclear what above limitation exactly means or referring to.

**Claim 21,** please see claim 10 above.

**Claim 10** recite the limitation "**possible**" in line 18 and "**not possible**" page 6 line 4.
It is unclear what these relate terms means, and how possible and not possible should that be
with regards to the invention.

**Claim 21,** please see claim 10 above.


## *Claim Objections*

3.  Claim 10, 11, 20, 21 and 22 are objected to because of the following informalities.
Appropriate correction is required.

**Claim 10** recites, "...**a small section smaller than**..." in line 19. For clarity, it is suggested
to include a <u>comma</u> between "section" and "smaller" as in "**a small section, smaller
than**...".

Claim **11, 21, and 22** please see claim 10 above.

**Claim 11** recites, "...**a large section larger than**..." in line 12. For clarity, it is suggested to
include a <u>comma</u> between "section" and "larger" as in "a large section, larger than...".

Claim **22,** please see claim 11 above.


## *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all
obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

1.  Claims 1 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amezawa

(U.S. Patent 6,438,362) and Sato (U.S. 6,088,324), in view of well established teaching in

art.

**Regarding Claims 1 and 12**, Amezawa '362 discloses a CDMA reception apparatus

comprising (see FIG. 1, a CDMA portable-telephone device; see col. 3, line 7-10):

propagation path variation estimation means **(see FIG. 1, Propagation path**

**estimator 14 and 21)** for estimating a propagation path variation from transmit power

control sections in the past to a certain present transmit power control section to obtain a

propagation path variation estimation values **(see col. 3, line 24-26;** the estimator 14 and 21

estimate propagation-path characteristics and supply the estimated values of the propagation-

paths. The estimator obtains the estimated value using a moving-averages method, wherein

an averaging is executed over a predetermined number of the latest data in the signal input

thereto one after another; note that the averaging is performed on the predetermined number

of latest data (i.e. the latest input data compares to the previous numbers of data). The

purpose of averaging is to obtain estimated path variation value among previous numbers of

data and current number of data; **see col. 3, line 33-35.**)

propagation path variation correction means **(see FIG. 1, Subtracter 15)** means for

correcting at least one of vector, amplitude and/or power of a received signal of said plurality

of transmit power control sections by said propagation path variation estimation value

obtained by said propagation path variation estimation means **(see col. 3, line 57-61;** the

subtracter 15, provided with the estimated value, obtains a corrected value by subtracting the

estimated value from the received demodulated pilot signal PD1. Then, the subtracter 15

supplies the corrected value to the interference-signal power calculator 17);

and averaging means (see **FIG. 1, Interference signal power calculator 24**) for

averaging at least one of vector, amplitude and/or power of received signal of said plurality

of transmit power control sections corrected by said propagation path variation correction

means (**see col. 3, line 61-65**; the interference-signal power calculator 17 averages the

corrected value by using a weighted averaging technique with a forgetting factor so as to

improve the accuracy of the interference-signal power).

Amezawa'362 does not explicitly discloses different transmit power control sections.

However, the above-mentioned claimed limitations are taught by Sato'324. In

particular, Sato'324 teaches collecting (**see FIG. 1, memory**), correcting/adjusting (**see FIG.
1, Amplitude correction circuit 114**), comparing (**see FIG. 1, comparing circuit 118**) and

controlling (**see FIG. 1, control circuit 121; see col. 8, lines 25-51**) variation of different

transmit power control sections in the past (**see FIG. 3, first/second slot**) to a certain present

transmit power control section (**see FIG. 3, third/fourth slot; note that variation of

different Transmit power control sections from past to a certain present/current slot;

see col. 10, lines 9 to col. 11, lines 33**).

In view of this, having the system of Amezawa'362 and then given the teaching of

Sato'324, it would have been obvious to one having ordinary skill in the art at the time the

invention was made to modify the system of Amezawa'362, for the purpose of providing

different transmit power control sections, as taught by Sato'324, since Sato'324 states the

advantages/benefits at col. 3, lines 50-65 that it would correct an amplitude of the carrier

signal point detected by detection means according to previous transmission power control values and predict a carrier signal point when next control for transmission power is executed. The motivation being that by collecting and comparing different transport power values from past which is stored in the memory to current, it can correct the amplitude of carrier signal point, thereby reducing the interference to other mobile and base stations since the signal amplitude is corrected/adjusted.

Neither Amezawa'362 nor Sato'324 explicitly discloses correction means for multiplying.

However, the above-mentioned claimed limitations are taught by well-established teaching in art. In particular, well-established teaching in art teaches correction means for multiplying. Note that Amezawa'362 performs the <u>correction</u> by subtraction in order to obtain a result, which is used for averaging. Thus, it is clear that one skill in the art can also performs <u>correction</u> by **multiplying** in order obtain the <u>same</u> result as subtraction, which is used for averaging. Regardless of the type of method (i.e. subtraction or multiplying) being used, the end result, a corrected data in order to perform averaging, is the same.

In view of this, having the combined system of Amezawa'362 and Sato'324, then given the teaching of well established teaching in art, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Amezawa'362 and Sato'324, for the purpose of correcting by multiplying, as taught by well established teaching in art The motivation being that by performing the multiplication to correct data/value, it can create an alternative and easier way to build the efficient algorithm for correcting data/value.

2.  Claims 2 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vasic (U.S.

    Patent 6,178,194), Shiraki (U.S. 6,389,296), Sawahashi (U.S. Patent 5,590,409), and further

    in view of well established teaching in art.

    **Regarding amended Claims 2 and 13**, Vasic '194 discloses a CDMA reception

    apparatus and method comprising:

    transmit power changing amount estimation means (**see FIG. 2, Channel Estimator**

    **40**; note that a channel estimation unit 40 estimates the transmits power changing amount by

    extracting, measuring, interpolating, and generating; **see col. 6, line 31-53**);

    transmit power changing amount correction means (**see FIG. 2, Diversity Combiner**

    **30 corrects the transmit power amount**) for correcting at least one of vector, amplitude

    and/or power of a received signal of said plurality of transmit power control sections by said

    transmit power changing amount estimation value obtained by said transmit power changing

    amount estimation means (**see FIG. 3, Diversity combiner receives and combines received**

    **signal power r1 and carrier estimated value p1 obtained by carrier estimator order to**

    **perform correcting; col. 6, line 41-44, see col. 10, lines 22-65**);

    Vasic '194 does not explicitly disclose changing amount of transmit power of a

    communication partner station varied by transmit power control from different transmit

    power control sections in the present transmit power control section from respective transmit

    power control sections in the past (**see Shiraki'296 col. 3, line 60 to col. 4, line 45; and col.**

    **14, line 1-67**; note that the receiver unit determines the changes in the transmit power

    received between <u>different</u> transmit power control sections: $n^{th}$ period (i.e. present section)

and n-1$^{th}$ period (i.e. the past section). Then after, the step size (i.e. the changing power

amount) is determined whether to increase or decrease the transmit power received.)

However, this limitation is taught by Shiraki'296. It would have been obvious to one

having ordinary skill in the art at the time the invention was made to modify the system of

Vasic '194, as taught by Shiraki'296 for the purpose of determining the changes/deviation in

the transmit power control sections between current session and past session since

Shiraki'296 states in col. 15, line 15-35 that such modification would reduce the deviation of

the transmission power control form a desired power in response to the travel speed of the

mobile station. The motivation being that by determining the changes transmission power

control in the receiver, it can reduce the interference among mobile units since the transmit

power is adjusted beforehand.

Neither Vasic '194 nor Shiraki'296 explicitly discloses averaging means for

averaging at least one of vector, amplitude and/or power of received signal of said plurality

of transmit power control sections corrected by said transmit power changing amount

correction means (see Sawahashi '409 col. 6, line 17-25, the mobile station 100 sequentially

measures average received power per transmission power control period, of the desired

signal transmitted from the base station 200. Thus, the mobile station 100 calculates the

average received power of the desired signal in the present transmission power control period

and that in one or more previous transmission power control period, and then calculates the

difference of the two).

This limitation is taught by Sawahashi '409. It would have been obvious to one

having ordinary skill in the art at the time the invention was made to modify the combined

system of Vasic '194 and Shiraki'296, as taught by Sawahashi '409 for the purpose of

preventing the interference to other mobile stations by achieving, by using open loop control,

a quick reduction in the transmission power of the mobile station in accordance with the state

of neighboring buildings in the reverse transmission power control, see Sawahashi '409 col.

4, line 4-9. The motivation being that by averaging, it can reduce extreme power variations.

Neither Vasic '194, Shiraki'296, nor Sawahashi '409 explicitly discloses correction

means for multiplying.

However, the above-mentioned claimed limitations are taught by well-established

teaching in art. In particular, well-established teaching in art teaches correction means for

multiplying. Note that Vasic'194 performs the correction by combing/adding in order to

obtain a result of corrected data/value. Thus, it is clear that one skill in the art can also

performs correction by **multiplying** in order obtain the same result as combing/adding.

Regardless of the type of method (i.e. combing or multiplying) being used, the end result, a

corrected data/value, is the same.

In view of this, having the combined system of Vasic'194, Shiraki'296, nor

Sawahashi '409, then given the teaching of well established teaching in art, it would have

been obvious to one having ordinary skill in the art at the time the invention was made to

modify the combined system of Vasic'194, Shiraki'296, and Sawahashi '409, for the purpose

of correcting by multiplying, as taught by well established teaching in art The motivation

being that by performing the multiplication to correct data/value, it can create an alternative

and easier way to build the efficient algorithm for correcting data/value.

3.  Claims 3 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over

    Amezawa'362 and Sato'324, as described above in claims 1 and 12 above, and further in

    view of Ling (U.S. Patent 5,297,161) and well established teaching in art.

    **Regarding Claims 3 and 14**, the combined system of Amezawa '362 and Sato'324

    discloses the averaging means as described in claims 1 and 12 above. Amezawa'362 further

    discloses wherein said averaging means and converting into a power **(see col. 3, line 18-26**;

    power calculator calculates/converts the desire signal and interference power from estimation

    values. Then, the power values are averaged; **see col. 4, line 52-57)**.

    Amezawa '362 does not explicitly disclose vector and converting vector divided by

    said division means into a power **(see Ling '161 Abstract**, a method and apparatus is

    provided for estimating signal power. The estimating is accomplished by correlating (206)

    an input data vector (204) with a set of mutually orthogonal codes to generate a set of output

    values. The input data vector (204) consists of data samples of a received orthogonal coded

    signal (202)).

    However, this limitation is taught by Ling '161. **Moreover, well-established**

    **teaching in art discloses the "addition means", "division means", and "averaging**

    **means".** In particular, it is well known in the art that in order to perform "averaging" over

    plurality of elements the following steps must be done utilizing well known mathematical

    technique: "addition means for performing vector addition" (i.e. First, add vector value of

    each element), "division means for dividing a vector added by said vector addition means

    with a number of vectors added" (Second, divide the sum of vectors by the total number of

    vectors).

Therefore, it would have been obvious to one having ordinary skill in the art at the

time the invention was made to modify the combined system of Amezawa '362 and Sato'324,

as taught by Ling '161 and utilizing well known mathematical technique for the purpose of

averaging power which is accomplished by correlating an input data vector with a set of

mutually orthogonal codes to generate a set of output values, see Ling '161 col. 4, line 65-68.

The motivation being that vectors cannot be averaged without converting into power in order

to estimates the power control, which reduces the interfaces among mobile stations.


4.  Claims 4, 5, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Amezawa '362 and Sato'324, as described above in claims 1 and 12, and further in view of

well established teaching in art.

**Regarding Claims 4 and 15**, the combined system of Amezawa '362 and Sato'324

discloses said averaging means as described in Claims 1 and 12 above. Amezawa'362 further

discloses wherein said averaging means is provided with amplitude addition and means for

converting amplitude into a power (**see col. 1, line 42-46**; note that $s1$, $s2$ and $i1$, $i2$

respectively represent the values of the desired-signal amplitude and the interference-signal

amplitude contained in the received signals $r1$ and $r2$. The amplitudes are added in Eqs. (1)-

(6). **Also, see col. 4, line 52-57**; similarly, the interference-signal power $I1$ corresponds to

the power of the signal $i1$ in Eqs. (1)-(6); **see col. 3, line 18-36**. The SIR processor 18 also

converts amplitudes into a power).

Amezawa '362 does not explicitly disclose addition means for performing amplitude

addition; division means for dividing amplitude added by said amplitude addition means with

a number of amplitudes added; and means for converting amplitude divided.

However, this limitation is taught by well-established teaching in art. In particular,

**well-established teaching in art discloses the "addition means", "division means", and**

**"averaging means".** In order to perform "averaging" over plurality of elements the

following steps must be done utilizing well known mathematical technique: "addition means

for performing amplitude addition" (i.e. First, add amplitude of each element), "division

means for dividing added by said amplitude addition means with a number of amplitudes

added" (Second, divide the sum of amplitude by the total number of amplitudes).

Therefore, it would have been obvious to one having ordinary skill in the art at the

time the invention was made to modify the combined system of Amezawa '362 and Sato'324

as taught by established teaching of well known mathematical techniques of estimating for

the purpose of estimating power utilizing amplitudes. The motivation being that amplitudes

cannot be averaged without converting into power in order to estimates the power control,

which reduces the interfaces among mobile stations.

**Regarding Claims 5 and 16**, the combined system of Amezawa '362 and Sato'324

discloses averaging means as described in claims 1 and 12 above. Amezawa'362 further

discloses the averaging means is provided with the power calculation (**see col. 3, line 18-26**;

note that the SIR processor 18 are supplied from the desired-signal power calculator 16 and

the interference-signal power calculator 17 the desired-signal power S1 and the interference-signal power I1; **see col. 4, line 52-57**).

Amezawa '362 does not explicitly disclose addition means for performing power addition; division means for dividing a power added by said power addition means with a number of powers added.

However, this limitation is taught by well-established teaching in art. In particular, **well-established teaching in art discloses the "addition means", "division means", and "averaging means".** In order to perform averaging over plurality of elements the following steps must be done utilizing well known mathematical technique: "addition means for performing power addition" (i.e. First, add power of each element), "division means for dividing added by said power addition means with a number of powers added" (Second, divide the sum of power by the total number of powers).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Amezawa '362 and Sato'324, as taught by established teaching of well known inherent mathematical techniques for the same reasons as discussed above in Claims 4 and 15.


5.  Claims 6 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amezawa '362 (U.S. Patent 6,178,194) and Sato'324, as applied to claims 1 and 12 above, and further in view of Rezaiifar (U.S. 6,377,809).

**Regarding Claims 6 and 17**, the combined system of Amezawa '362 and Sato'324

discloses propagation path variation estimation means for estimation propagation path

various from transmit power control sections as described in claims 1 and 12 above.

Neither Amezawa '362 nor Sato'324 explicitly discloses wherein using a channel (**see**

**Rezaiifar'809 FIG. 2 and 3**; control channel) not performing transmit power control whose

transmit power is not controlled (**see Rezaiifar'809 col. 8, lines 20-34, 20-34; see col. 9,**

**lines 1-32**; note that the control channel is used to transmit control frames when there is

scheduling or control information (i.e. estimation means), when transmit power control is not

performing since power control bits are not transmitting. Since power control bits are not

transmitting on the control channel, transmit power not controlled).

However, this limitation is taught by Rezaiifar'809. Therefore, it would have been

obvious to one having ordinary skill in the art at the time the invention was made to modify

the combined system of Amezawa '362 and Sato'324, as taught by Rezaiifar'809 for the

purpose of providing a control channel to send control information while transmit power

control not performing nor transmit power is controlled, since Rezaiifar'809 states in col. 9,

line 15-24 that it will increase capacity and minimize interference. The motivations being

that by utilizing the control channel to send control information while not performing

transmit power control, it will increase radio bandwidth capacity and decrease the

interference.

6.  Claims 7 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vasic'194,

Shiraki'296 and Sawahashi '409, as applied to claims 2 and 13 above, and further in view of

Dohi (U.S. Paten 5,604,766).

**Regarding claims 7 and 18**, the combined system of Vasic'194, Shiraki'296, and

Sawahashi '409 discloses the CDMA reception apparatus, wherein said transmit power

changing amount estimation as described in Claims 2 and 13 above.

Neither Vasic'194, Shiraki'296, nor Sawahashi '409 disclose a transmit power

changing amount using a transmit power control indicator transmitted from said CDMA

reception station (**see Dohi '766 col. 5, line 49-55**; note that if the measured result is greater

than the reference SIR, the mobile station transmits a transmission power control bit which

commands the base station to reduce its transmission power.  On the contrary, if the

measured result is less than the reference SIR, the mobile station transmits a transmission

power control bit, which commands the base station to increase its transmission power (step

S24).  The transmission power control bit is inserted into an information signal in a reverse

frame, and is transmitted to the base station).

This limitation is taught by Dohi '766.  It would have been obvious to one having

ordinary skill in the art at the time the invention was made to modify the combined system of

Vasic '194, Shiraki'296S, and Sawahashi '409, as taught by Dohi '766 for the purpose of

determining a transmission power control bit for controlling the transmission power of the

base station on the basis of the measured result, see Dohi '766 col. 2, line 25-28. The

motivation being that by sending power control indicator, it can alert the remote station to

adjust the power accordingly.

7. Claims 8 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amezawa '362 (U.S. Patent 6,178,194) and Sato'324, as applied to claims 1 and 12 above, and further in view of Sawahashi '409 (U.S. Patent 5,590,409).

**Regarding Claims 8 and 19**, the combined system of Amezawa '362 and Sato'324 disclose averaging means as described above in claims 1 and 12 above.

Neither Amezawa '362 nor Sato'324 explicitly discloses setting an averaging section setting means for setting an averaging section (**see Sawahashi '409 col. 6, line 17-24**, note that mobile station constantly measures the average received power per transmission power control period/section, set the averaging section for the power calculation in accordance with the transmission power control but; see Sawahashi '409 col. 4, line 24-29).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Amezawa '362 and Sato'324 as taught by Sawahashi '409 for the purpose of preventing the interference to other mobile stations by achieving, by using open loop control, a quick reduction in the transmission power of the mobile station in accordance with the state of neighboring buildings in the reverse transmission power control, see Sawahashi '409 col. 4, line 5-9. The motivation being that by averaging, it can reduce extreme power variations.

## *Allowable Subject Matter*

8.  Claims 11 and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ian N Moore whose telephone number is 703-605-1531. The examiner can normally be reached on M-F: 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ken Vanderpuye can be reached on 703-308-7828. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

INM
6/24/2004

KENNETH VANDERPUYE
PRIMARY EXAMINER